

Francisco Santos

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SUMMARY

Machine Learning Engineer with hands-on experience in building a startup product from concept to deployment. Proven leadership in product development, data pipeline management, and ML algorithm implementation. Interested in roles that challenge my skill set and offer opportunities for deepening my expertise in deep learning applications and computational models.

SKILLS

Language: Python, C, C++, Java (OOP)

Web & APIs: Flask, Dialogflow, Web Audio API,
Chrome Extensions

DevOps: Linux, Git, Bash, Docker

Databases: SQLite

Visualization: Matplotlib, Three.js

Machine Learning: PyTorch, TensorFlow, Hugging
Face Transformers, LangChain

Data Tools: NumPy, Pandas, ELK Stack, Kafka

PROFESSIONAL EXPERIENCE

Data Engineer Bring Global

November 2024 - May 2025

Led the initial phase of a full lift-and-shift migration, moving data from source systems to the Bronze layer (object storage) of the data lake architecture.

Accomplishments:

- Rewrote and optimized **ETL** procedures to ensure reliable and accurate data extraction and integration.
- Maintained and managed **dataflow** scripts in **Oracle Cloud Infrastructure** (OCI) to automate and monitor the input data migration process.

ML Engineer MagicSync

April 2023 - June 2024

Spearheaded the development of an intelligent product capable of auto-filling forms by matching form fields with corresponding data, significantly reducing user input errors and saving time.

Accomplishments:

- Conducted comparative evaluations of multiple lightweight machine learning models (**LLMs**) to accurately map form fields to corresponding data.
- Created a Hugging Face Space featuring a **Gradio** interface for real-time detection and classification of form input types, streamlining data placement and user interaction.
- Developed a **Google Chrome extension** for seamless integration with the user's browser, enabling automatic form filling.
- Engineered a modular, block-based browser interaction framework, allowing for high adaptability to various forms without the need for pre-existing configurations.

Software Engineer - Intern Altice Portugal

Jul 2020 - Aug 2020

Part of a diverse team tasked with the development and operational support of various platforms, from high-end VoIP services to custom Identity Access Management solutions.

Accomplishments:

- Engaged in data analytics tasks to improve internal systems like Altice's log centralization and operational intelligence platform, leveraging **Kafka** and **ELK stack** (Elasticsearch, Logstash, Kibana).
- Implemented a Nexus user onboarding chatbot with **DialogFlow** and **Flask**.
- Completed a Certified **Design Thinking** Training course to better understand user-centric design approaches.

Professional athlete
Sporting Clube de Portugal

April 2003 - January 2025

Accomplishments:

- Competed in the 2020 **Tokyo Olympics**, representing Portugal in backstroke events.
- Set multiple Portuguese **national records**, five of which still stand.
- Won national titles in both short-course and long-course pools, accumulating over **50 medals** in Portuguese national competitions.
- Represented Portugal in high-profile international meets, including the 2022 European Long-Course Championships and the 2021 World Short-Course Championships.

EDUCATION

Master of Electrical and Computer Engineering (Honours)
Instituto Superior Técnico (IST)

February 2020 - June 2023

- Major in **Computers** and Minor in Decision and Control
- Dissertation: **SampleXplorer**, leveraging AI for Creative Sound Exploration: **an Interface for Music Generation Using Variational Autoencoders** - Utilized Variational Autoencoder (VAE) and image processing techniques on sound spectrograms to develop a sound-generating system. Implemented an interactive web interface using Three.js for latent space exploration, enabling creative compositions and musical motifs.
- **Relevant Courses:** Artificial Intelligence and Decision Systems, Machine Learning, Parallel and Distributed Computing, Information Systems and Databases, Cryptography and Communications Security, Networks and Internet Services

Bachelor of Electrical and Computer Engineering
Instituto Superior Técnico (IST)

September 2016 - January 2020

VOLUNTEERING

Team member

September 2023 - Current

Deep Learning Sessions Portugal

- Created a podcast aimed at promoting and disseminating deep learning topics in Portugal.
- Assisted the team in organizing live events to engage the community.

Main-stage team member
Websummit

November 2018

- Guided attendees throughout the main venue and provided key information.
- Assisted in the assembly and setup of stage and backstage technical equipment

AWARDS AND ACHIEVEMENTS

1st Place on NEECathon 2nd edition
Instituto Superior Técnico (IST)

October 2019

- Worked as part of a team to create hardware and software solutions integrating physical activity as input for video games and applications.
- Technologies: Bitalino, Python, PyGame, and OpenSignals for project development.

22nd Place, 200m backstroke
2020 Summer Olympics

July 2021

- Qualified and competed in the 2020 Summer Olympics in Tokyo, representing Portugal in the 100m (28th place) and 200m (22nd place) backstroke.

LANGUAGES

English - Expert

Portuguese - Native